

REMARKS

The present Amendment amends claims 2-10 and 12-17, leaves claim 11 unchanged and adds new claim 18. Therefore, the present application has pending claims 2-18.

In the Office Action the Examiner asserts that some of the references cited by the October 1, 2003 Information Disclosure Statement has not been considered since it was provided with the application. The Examiner alleges that he was unable to locate such references in the parent application.

Applicants hereby submit that the Examiner is obligated to indicate consideration of the references cited by the October 1, 2003 Information Disclosure Statement since an Information Disclosure Statement fully complies with 37 CFR §1.98 if it provides a listing of references that were considered by the Examiner in the parent application Serial No. 09/520,532, now U.S. Patent No. 6,708,209 without copies of the listed references. The Examiner's attention is directed to 37 CFR §1.98(d) which specifically states:

“(d) a copy of any patent, publication, pending U.S. application or other information, as specified in paragraph (a) of this section listed in an Information Disclosure Statement is required to be provided, even if the patent, publication, pending U.S. application or other information was previously submitted to, or cited by, the Office in an earlier application, unless:

- (1) the earlier application is properly identified in the Information Disclosure Statement and is relied upon for an earlier effective filing date under 35 USC §120; and
- (2) the Information Disclosure Statement submitted in the earlier application complies with paragraph (a) through (c) of this section”.

The October 1, 2003 Information Disclosure Statement fully complies with the above noted section of 37 CFR §1.98 being that it properly identified the earlier application on page 1 thereof, and the identified earlier application is being relied upon for an earlier effective filing date under 35 USC §120. Further, the October 1, 2003 Information Disclosure Statement submitted a listing of the references cited in the earlier application as part of various Information Disclosure Statements which fully complied with paragraphs (a) through (c) of 37 CFR §1.98. It is noted that each of the references as listed in the October 1, 2003 Information Disclosure Statement were in fact considered by the Examiner in the earlier application. It is further noted that each of the references as listed in the October 1, 2003 Information Disclosure Statements were considered by the very same Examiner in the earlier application.

Therefore, Applicants need not provide copies of the references cited in the earlier application and as such the Examiner is obligated to indicate his consideration of the references as listed in the October 1, 2003 Information Disclosure Statement. An indication that such references have been considered should be provided with the forthcoming Office Action. To aid such indication a clean copy of the October 1, 2003 Information Disclosure Statement is attached so as to permit an indication of consideration thereof by the Examiner.

Claims 2-17 stand rejected under 35 USC §103(a) as being unpatentable over McCloghrie (U.S. Patent No. 6,286,052) in view of Haddock (U.S. Patent No. 6,104,700). This rejection is traversed for the

following reasons. Applicants submit that the features of the present invention as now more clearly recited in claims 2-17 are not taught or suggested by McCloghrie or Haddack whether taken individually or in combination with each other as suggested by the Examiner. Therefore, Applicants respectfully request the Examiner to reconsider and withdraw this rejection.

The present invention is directed to a network system including a plurality of networks which are interconnected to each other wherein each network includes a plurality of host and a policy server, the policy server, a method of guaranteeing the quality of a communication between a plurality interconnected networks including a policy server, and a storage medium for storing a computer readable and executable program which causes a computer to guarantee the policy of a communication between a plurality of interconnected networks each included in a policy server.

According to the present invention each policy server of each network sets a quality guaranteed path in the network to which it belongs according to the policy held in the policy server. Thus, according to the present invention a policy in a first one of the networks includes a policy holding unit for holding a policy that can be guaranteed in the first network with regard with a communication performed by another network via the first communication or a communication performed between another network and a host in the first network, a unit for providing a quality guaranteed path having a required policy based on the policy held by the policy holding unit with regard to a communication performed by another network via the first network or a communication performed between another network and a host in the first network, a policy sending unit for sending the policy held by it to the policy

server of the another network, a unit for receiving a policy sent by the policy sending unit in the policy server of the another network and a resource allocation arbitration control unit for calculating a guaranteed quality of a communication path from an end point in the first network to a border on a second network side on a communication path connected to the second network adjoining the first network policy based on the policy held by the policy holding unit and the policy thus received.

Further, according to the present invention the resource allocation arbitration control unit updates the policy held by the policy holding unit based on a quality thus calculated and the policy sending unit sends the policy thus updated to the policy server in the second network.

The present invention provides that the networks each being managed by different organizations, includes a policy server for managing the network in which it is placed that advertises a policy of the organization to another organization and that based on the advertised policy a policy server of another network conducts negotiations with the policy server of the first network. Once a policy has been negotiated then the policy of the policy servers in the first and second networks are updated. These features as now more clearly recited in the claims are not taught or suggested by any of the references of record whether taken individually or in combination with each other.

McCloghrie teaches a system within a computer network which identifies specific traffic flows originating from a given network entity and request and applies appropriate policy rules or service treatments to the traffic flows. McCloghrie teaches that a network entity includes a flow declaration

component that communicates with one or more application programs and that the flow declaration component includes a message generator and an associated memory for storing one or more traffic flow data structures. As taught by McCloghrie for a given traffic flow the application program issues one or more calls to the flow declaration component provided with information identifying the traffic flows and that the flow declaration component then opens a flow management session with a local policy enforcer that obtains policy rules or service treatments for the identified flow from a policy server and applies those rules or treatment to the specific traffic flows from the network entity.

Thus, McCloghrie simply teaches that specific traffic flows are identified and control of the identified traffic flows is performed by applying appropriate policy rules or services to the policy of the identified traffic flows.

As is quite clear from the above, McCloghrie does not teach or suggest numerous features of the present invention as recited in the claims. Particularly, McCloghrie does not teach or suggest that a policy server, being provided in each of a plurality of networks for particular organizations, manages the quality of service being provided for a particular communication between the organizations by interacting with the policy server of another network of another organization so as to negotiate a policy that will apply to the communication between the two different networks. Such features are clearly not taught or suggested by McCloghrie.

Further, McCloghrie does not teach or suggest the unique process being performed by the elements of the policy server of each network as in the present invention as recited in the claims. According to the present

invention as described above, a resource allocation arbitration unit is provided for performing a particular type of calculation so as to determine a guaranteed quality of a communication path from an end point in a first network to a border in a second network and that this calculated guaranteed quality is then used so as to update the policy being held by the policy server in the first network and such updated policy is then sent to the policy server in the second network. Such features are clearly not taught or suggested by McCloghrie. At no point is there any teaching or suggestion in McCloghrie that, for example, the flow declaration component or the application program communicates and exchanges policies or performs a negotiation with a corresponding flow declaration component or application program of another network as in the present invention as recited in the claims.

In the Office Action the Examiner also recognizes the above described deficiencies of McCloghrie by stating that:

"McCloghrie fails to explicitly teach a policy sending unit...a unit for receiving a policy sent by the policy sending unit...and a resource allocation arbitration control unit for calculating a guaranteed policy of a communication path of an end point in the first network to a border on a second network side of a communication path connected to the second network adjoining the first network based on the policy held by the policy holding unit and the policy thus received, wherein the resource allocation arbitration control unit updates the policy held by the policy holding unit based on the quality thus calculated, and wherein the policy sending unit sends the policy thus updated to the policy server in the second network".

Thus, McCloghrie fails to teach or suggest a unit for providing a quality guaranteed path having a required policy based on the policy held by the policy holding unit with regard to a communication performed by another

network via the first network or a communication performed between another network and a host in the first network as recited in the claims.

Further, McCloghrie fails to teach or suggest a policy sending unit for sending the policy held by it to the policy server of the another network and a unit for receiving a policy sent by the policy sending unit in the policy server of the another network as recited in the claims.

Still further, McCloghrie fails to teach or suggest a resource allocation arbitration control unit for calculating a guaranteed quality of a communication path from an end point in the first network to a border on the second network side of a connection path connected to the second network adjoining the first network based on the policy held by the policy holding unit and the policy thus received as recited in the claims.

Still further yet, McCloghrie fails to teach or suggest that the resource allocation arbitration control unit updates the policy held by the policy holding unit based on the quality thus calculated and that the policy sending unit sends the policy thus updated to the policy server in the second network as recited in the claims.

The above noted deficiencies of McCloghrie are not supplied by any of the other references of record whether taken individually or in combination with each other. Particularly, the above described deficiencies of McCloghrie are not supplied by Haddock. Therefore, combining the teachings of McCloghrie and Haddock in the manner suggested by the Examiner in the Office Action still fails to teach or suggest the features of the present invention as recited in the claims.

Applicants hereby note that Haddock was considered by the Examiner in the parent application Serial No. 09/520,832. It is particularly noted that in the Notice of Allowance of the parent application issued on July 15, 2003 in the paragraph bridging pages 2 and 3 and the first full paragraph on page 3 thereof the Examiner acknowledged certain teachings of Haddock but fully recognized the numerous deficiencies of Haddock. Specifically, the Examiner states that Haddock:

"fails to expressly teach a guaranteed quality calculation unit to calculate, from a policy for a path between the local network and other networks, a quality that can be guaranteed for the path between local network and the other network; and a quality guaranteed path setting unit to provide a quality guaranteed path, the quality guaranteed path having a guaranteed quality within the quality calculated by the guaranteed quality calculation unit for the path between the local network and the other network".

These very same operations are performed by elements recited in the claims of the present application particularly with respect to the unit for providing a quality guaranteed path, the policy sending unit, the unit for receiving a policy sent by the policy sending unit and the resource allocation arbitration control unit for calculating a guaranteed quality of a communication path.

Thus, the Examiner current position with respect to Haddock is contradictory and should be reconsidered by the Examiner. More importantly, Haddock should be withdrawn from being used to reject the claims since Haddock does not teach or suggest numerous features of the present invention that are reflected in the current claims as readily admitted by the Examiner.

It is quite clear from the teachings of Haddock that the disclosure therein is simply directed to a packet forwarding device in a network for managing a bandwidth of the network. There is absolutely no teaching or suggestion at any point in Haddock of the above described features of the present invention which are also deficient in McCloghrie.

Thus, Haddock fails to teach or suggest a unit for providing a quality guaranteed path having a required policy based on the policy held by the policy holding unit with regard to a communication performed by another network via the first network or a communication performed between another network and a host in the first network as recited in the claims.

Further, Haddock fails to teach or suggest a policy sending unit for sending the policy held by it to the policy server of the another network and a unit for receiving a policy sent by the policy sending unit in the policy server of the another network as recited in the claims.

Still further, Haddock fails to teach or suggest a resource allocation arbitration control unit for calculating a guaranteed quality of a communication path from an end point in the first network to a border on the second network side of a connection path connected to the second network adjoining the first network based on the policy held by the policy holding unit and the policy thus received as recited in the claims.

(a) As for claim 2:

The Examiner alleges that the applicant's invention as claimed in claim 2 would be obvious from the combination of McCloghrie and Haddock. However, in addition to the above described deficiencies of McCloghrie and Haddock, there is no teaching or suggestion in either of the cited references

of a mechanism for advertising a policy of one organization to another organization, or for receiving the policy thus advertised as in the present invention.

(b) As for claim 3:

The portion (Col.9, lines 43-57 of Haddock) does not teach or suggest the further calculation as alleged by the Examiner. The portion indicated by the Examiner merely describes a method for adding a packet to an appropriate queue, and dropping the packet.

(c) As for claim 4:

The Examiner alleges that Haddock et al teaches claim 3, and that Haddock's Fig. 2 shows a quality-guaranteed path between the first network and another network. As set forth above, however, the network device as taught by Haddock controls QoS networks which quite different from managing the policies of different networks of different organizations as in the present invention.

(d) As for claim 5:

As seen from Fig. 1B referred to in the Abstract and at col.4, lines 34-63 of Haddock indicated by the Examiner, the construction of the apparatus as taught by Haddock is quite different from that of the present invention.

(e) As for claim 6:

The RSVP (Resource Reservation Protocol) system described at col.1, lines 33-50 and col.4, lines 34-63 of Haddock indicated by the Examiner, cannot be executed for different organizations. Advertisement of a policy and negotiations of a resource are never conducted between different

organizations in RSVP as is well know. Rather, Applicant's invention solves a problem which can not be solved by the RSVP system as taught by Haddock.

(f) As for claim 7:

The portion at col. 6, line 56 to Co1.7, line 8 of Haddock indicated by the Examiner describes queue-depth control and buffer control as opposed to the details of the unit for providing a quality guaranteed path as in the present invention.

(g) As for claim 8:

The portion at the Table 1 and col.5, lines 50-57 of Haddock indicated by the Examiner merely shows a table identifying a traffic group contrary to the management of a present resource allocation state as in the present invention.

(h) As for claims 9-17:

Since claims 9-17 correspond to claims 2-8, the same aguments presented with respect to claims 2-8 apply as well in a corresponding manner to claims 9-17.

Therefore, both McCloghrie and Haddock fail to teach or suggest the features of the present invention as recited in the claims and as such combining McCloghrie and Haddock in the manner suggested by the Examiner in the Office Action still fails to teach or suggest the features of the present invention as recited in the claims. Accordingly, reconsideration and withdrawal of the 35 USC §103(a) rejection of claims 2-17 as being unpatentable over McCloghrie in view of Haddock is respectfully requested.

The remaining references of record have been studied. Applicants submit that they do not supply any of the deficiencies noted above with respect to the references utilized in the rejection of claims 2-17.

As indicated above, the present Amendment adds new claim 18 which depends from claim 2. Thus, new claim 18 recites the same features recited in claim 2 shown above not to be taught or suggested by McCloghrie and Haddock. Therefore, the same arguments presented above with respect to claim 2 apply as well to new claim 18.

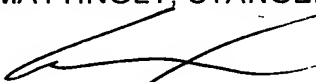
New claim 18 recites a further feature that the each of the first and second networks is a network of one of a plurality of organizations. Such a teaching cannot be found in either McCloghrie or Haddock. Thus, combining McCloghrie and Haddock in the manner suggested by the Examiner in the Office Action does not teach or suggest this further feature recited in new claim 18.

In view of the foregoing amendments and remarks, applicants submit that claims 2-18 are in condition for allowance. Accordingly, early allowance of claims 2-18 is respectfully requested.

To the extent necessary, the applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C., Deposit Account No. 50-1417 (500.38331CX1).

Respectfully submitted,

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